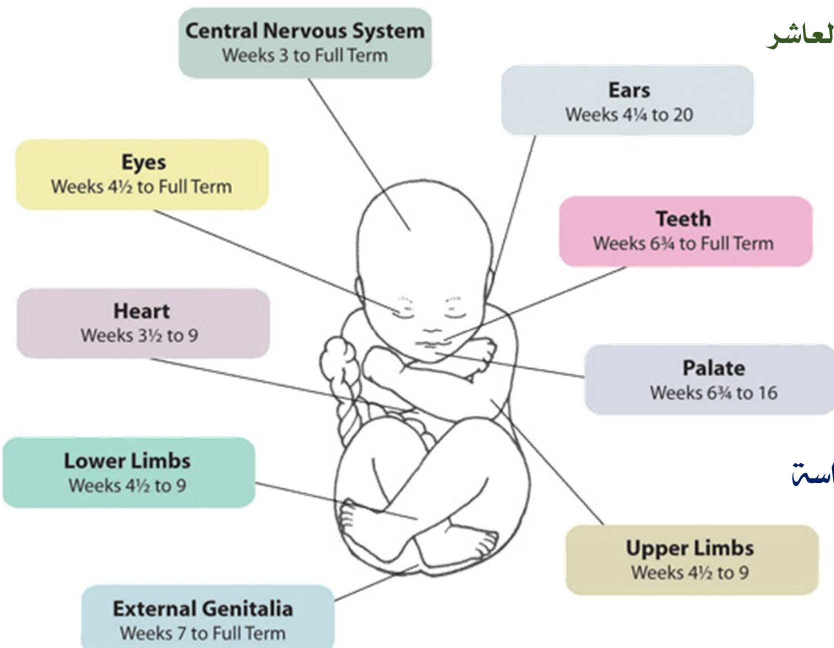
بسم الله الرحمن الرحيم

عنوان المحاضرة: Genetics
تاريخ المحاضرة : 21/2/2013
المحاضر :أ.د.عصام الجندي

الـOrganogensis:



ـيحدث من الأسبوع الأول بعد غياب أول دورة وحتى الأسبوع العاشر (من اليوم 18 حتى اليوم 55 من حدوث الـFertilization)

ـفيه أدوية ليها تأثير محدد على النمو زي:

* الـGentamycin في الأسابيع من الرابع للثامن ← الطفل بيكون أصم

* الـTetracycline ← أسنان صفراء وعرضة أكبر للتسوس

ـالحاجات اللي بتتأثر طول فترة الحمل:

1-CNS 2-Eyes 3-External Genitalia 4-Teeth

ـالـCNS بيتأثر طول فترة الحمل ولو حتى على مستوى الـBehavior أو يظهر Later in life في صورة تأخر في الدراسة أو عنف في التعامل

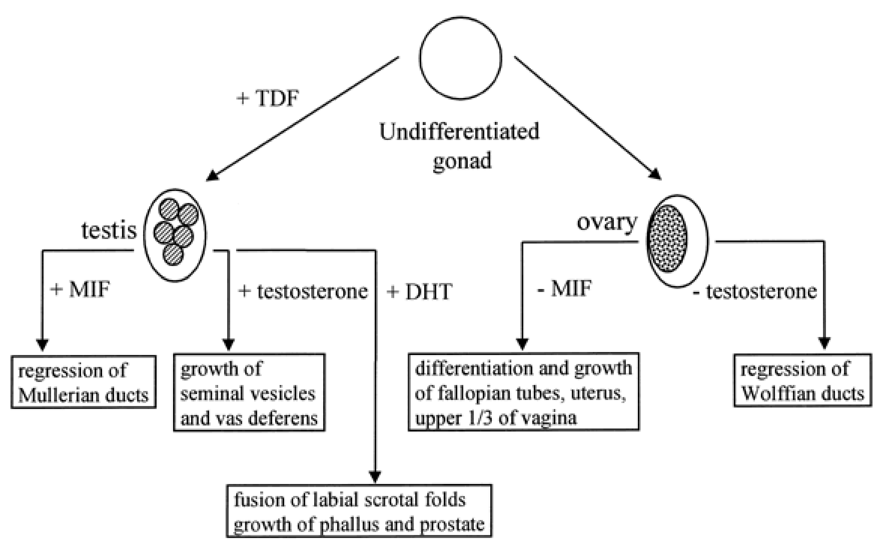
Teratogenic Drugs:

1- ACE Inhibitors (e.g. Captopril, Benazepril) 2- Acne medication (e.g. Isotretinoin) 3- Alcohol
4- Antibiotics (e.g. Tetracycline, Streptomycin) 5- Androgens 6- Anticoagulant (e.g. Warfarin)
7- Anticonvulsants (e.g. Phenytoin, Carbamazepine) * Patient switch to Hypnotics (e.g. Phenobarbitone)
8- Antidepressants (e.g. Lithium) 9- DES 10- Thalidomide

** If woman can't stop the drug for any reason, she should try to reduce the dose as possible as she can

Sexual Differentiation: (By week 6)

TDF: Testis Determining Factor is carried on the last part of on the short arm of the Y chromosome. So at some cases due to some mutations it is carried on the X chromoe some → 46,XX male



Examples of Genetic problems:

1-Partial Androgen Insensitivity:

-(46, XY) individual whose cells are unable to respond to androgens. So at puberty, there is an impair in masculinization of male genitalia giving (ambiguous genitalia) and the male secondary sexual characteristics doesn't develop but Female does as his breasts respond to Androgen as Estrogen

2-Pseudo-vaginal perineoscrotal Hypospadias: **The most Common intersex problem in Egypt (Upper)
Cause: 5 α reductase Deficiency (that converts Testosterone into 5α-dihydrotestosterone)
C/P: The Genitals are midway between Male and Female

***$\frac{2}{3}$ of the Abortus are chromosomally abnormal although normal parents (usually d.t. late age of pregnancy → abnormal meiosis)**

3-The Vanishing embryo in IVF:
One of the fetuses in a twin pregnancy spontaneously aborts, usually during the first trimester; the fetal tissue is absorbed by the other twin, the placenta, or the mother, thus giving the appearance that the twin "vanished."

4-Blighted ovum: happens when a fertilized egg attaches itself to the uterine wall, but the embryo does not develop. Cells develop to form the pregnancy sac, but not the embryo itself.

5-Triploidy: (69 Chromosomes) → Less malignant vesicular mole   Cause: One ovum fertilized by 2 sperms
**** When the DNA material is lost and the the sperm DNA reduplicates forming 46 chromosomes → More malignant Vesicular mole (high risk of choriocarcinoma)**

Preimplantation genetic diagnosis:
Procedures that are performed on embryos prior to implantation to avoid selective pregnancy termination as the method makes it highly likely that the baby will be free of the disease under consideration. Usually thus is done adjunct to an in vitro fertilization (IVF).